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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,792	01/28/2004	Daniel C. Sigg	P-11213.00	3983

27581 7590 04/26/2006

MEDTRONIC, INC.
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MINNEAPOLIS, MN 55432-9924

EXAMINER

REIDEL, JESSICA L

ART UNIT	PAPER NUMBER
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3766

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/766,792	SIGG ET AL.	
	Examiner	Art Unit	
	Jessica L. Reidel	3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 19, 2006 has been entered.

Response to Amendment

2. The Affidavits filed on November 17, 2005 and April 19, 2006 under 37 CFR 1.131, in combination, are sufficient to overcome the Knapp et al. (2005/0070985) reference.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 8-9, 12, 14 and 16-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes et al. (U.S. 5,282,844) (herein Stokes) in view of Michal et al. (U.S. 6,287,285) (herein Michal). As to Claims 1, 19-21 and 27, Stokes discloses an implantable medical electrical lead, read as an implantable therapy and/or diagnostic device (see Stokes Abstract and Fig. 1) comprising tines, read as fixation elements 26 adapted to secure the device to an implant site (see Stokes Figs. 2-3 and column 7, lines 4-8), one or more elongate conductors 28 extending within the elongated lead body 10 of the device (see Stokes Figs. 2 and

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6 and column 8, lines 48-56) and a polymeric insulation tubing, read as a polymeric layer 12 overlaying a portion of the device in proximity to the implant site and inherently including an outer surface (see Stokes Figs. 1-2, 4, 6, 9 and 11, column 6, lines 49-52, column 7, lines 35-38 and column 8, lines 11-13). It is inherent that the one or more conductors 28 include electrically conductive wires. Stokes discloses the claimed invention as discussed above except that the outer surface of the polymeric layer 12 is not disclosed to comprise a layer of a catalytic agent, having a nitrite reductase and/or nitrate reductase or nitrosothiol reductase activity such that the catalytic layer converts nitrite/nitrate or nitrosothiols to nitric oxide when in contact with blood.

Michal, however, discloses a method of providing a therapeutic, diagnostic or lubricious hydrophilic coating on a variety of intracorporeal medical devices such as stents, catheters, guidewires, leads, vascular grafts or any intracorporeal device coated with a polymeric primer or without a primer (see Michal Abstract and column 2, lines 5-12). Specifically, Michal discloses one embodiment of the invention 10 comprising a catheter, read a device 11 having a therapeutic, diagnostic, or hydrophilic coating 18, the coating 18 comprising a polymerized base coat 19 on the device (formed from a solution of a binding component and a grafting component) and a top coat 20 on the base coat 19, comprising a therapeutic, diagnostic or hydrophilic agent, or a complex of a therapeutic, diagnostic or hydrophilic agent and a linking agent, the therapeutic, diagnostic or hydrophilic agent or the linking agent having a functional group which bonds with a binding component of the polymeric base coat 19, the functional group selected from the group consisting of carboxyl, hydroxy, amine, and thiol, covalently bonded to the binding component (see Michal Figs. 1-2, column 2, lines 13-39, column 6, lines 35-50 and column 18, lines 30-67 – column 19, lines 1-3).

Michal further discloses that the therapeutic or diagnostic agent of the top coat 19 may comprise a nitric oxide donating compound, read as a catalytic agent (see Michal column 4, lines 1-9 and column 19, lines 66-67 – column 20, lines 1-4) and that the nitric oxide donor compounds/catalytic agents may be used to improve biocompatibility of a medical device, to prevent or inhibit platelet aggregation, to inhibit restenosis, to promote wound healing or they may be used as a vasodilator relaxing smooth muscles of a vessel prior to, during and/or after angioplasty or device placement (see Michal column 4, lines 10-13 and lines 52-57). Michal discloses a variety of suitable nitric oxide donor drugs including nitric oxide-polyamine complexes, 2-methyl-2-nitrosopropane, S-Nitroso-N-acetyl-D,L-penicillamine, 3-morpholinoxydimine, sodium nitrate, s-nitrosoglutathione, sodium nitroprusside, and nitroglycerine (see Michal column 4, lines 57-65) and it is inherent that any of these catalytic agents have nitrite reductase and/or nitrate reductase or nitrosothiol reductase activity and that they convert nitrite/nitrate to nitric oxide when in contact with blood since they all are capable of inhibiting platelet aggregation and/or restenosis. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the polymeric layer of Stokes in view of Michal to include a polymeric base coat and a top layer of a catalytic agent having a nitrite reductase and/or nitrate reductase or nitrosothiol reductase activity such that the catalytic layer converts nitrite/nitrate or nitrosothiols to nitric oxide when in contact with blood in order to provide a lead with improved biocompatibility, capabilities to prevent or inhibit platelet aggregation and/or to inhibit restenosis, capabilities to promote wound healing and/or to be able to be used as a vasodilator relaxing smooth muscles of a vessel prior to, during and/or after angioplasty or lead placement.

5. As to Claim 2, Stokes discloses that the polymeric layer 12 is formed of any flexible biocompatible and biostable insulator especially silicone rubber or polyurethane (see Stokes column 6, lines 49-52).

6. As to Claim 4, Stokes discloses that the device comprises an elongated lead body 10, which carries the one or more conductors 28 (see Stokes Fig. 1 and column 8, lines 48-56). In reference to Stokes Figs. 1 and 6, the Examiner takes the position that the polymeric layer 12 forms the device body 10 of the device (see Stokes Fig. 6) since the two are not depicted as separate elements (see Stokes Fig. 1).

7. As to Claim 8, the previously modified Stokes reference discloses the claimed invention as discussed above but does not expressly disclose an embodiment where the polymeric layer overlays the device body. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device as taught by Stokes with a polymeric layer that overlays a device body, because Applicant has not disclosed that an overlaying polymeric layer provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a polymeric layer that forms the device body as taught by Stokes, because it provides a lead or device where the polymeric layer can not wear off or leave lost pieces of polymeric layer in a patient during use and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Stokes.

Therefore, it would have been an obvious matter of design choice to modify Stokes to obtain the invention as specified in the claim(s).

8. As to Claims 5 and 9, Stokes discloses the claimed invention as discussed above except that the polymeric layer is not a multilumen tube. Michal, however, discloses that the polymeric layer 19 of the coating 18 on the device 11 may comprise an outer tubular member 21 and an inner tubular member 22 disposed in a lumen of the outer tubular member and having a lumen configured for slidably receiving a guidewire 23 (see Michal Figs. 1-2 and column 6, lines 47-50). Michal does not explicitly state why the inner tubular member 22 having a lumen is needed to be inserted into the lumen of the outer tubular member 21 but it appears that the member 22 is used so that the guidewire does not damage the inner components of the device via pressure or friction or to otherwise isolate the guidewire from the inner components of the device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the polymeric layer of Stokes, to include a multilumen tube as taught by Michal for slidably receiving a guidewire for placing the lead within a patient without damaging the inner components of the device.

9. As to Claim 12, Stokes discloses the claimed invention as discussed above except that the polymeric layer is not disclosed to include a plurality of pores extending therethrough through which a lipophilic salts or nitrite/nitrate or nitrosothiols can leak to the catalytic agent. Michal, however, discloses that in an alternate embodiment of the coating 18 the polymeric layer can include an ionic compound, or salt, such that upon insertion into a bodily fluid or patient blood vessel the salt enhances the polymer lubricity to ease insertion of the device (see Michal column 5, lines 9-33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Stokes in view Michal to include a polymeric layer including a plurality of pores extending therethrough through which a lipophilic salts can leak to

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the catalytic agent so that upon insertion of the device into a patient lubricity of the device is enhanced to better the invention.

10. As to Claims 3 and 14, Stokes discloses that the polymeric layer 12 of the elongated device body 10 further includes a fluid permeable polymer body 40, read as a bulk matrix containing a reservoir of sodium salt, read as lipophilic salt since it dissolves in body fluid, that can leak through an aperture of a chamber out into the tissue or body site surrounding the lead to counter undesirable interactions between the lead and the body site (see Stokes Figs. 2, 4, 8-9 and 11, column 7, lines 50-67 – column 8, lines 1-24 and column 15, lines 1-5 and lines 34-52). The Examiner takes the position that although the salt is disclosed to move through the aperture or porous metallic or other conductive material of the electrode 22, once it is outside the lead/device it is in contact with the polymeric layer or in immediate vicinity of the outside layer of the electrode.

11. As to Claim 16, Stokes discloses that it is well known in the art to utilize a polymeric plug held within the polymeric layer 12 of a device 10 which contains a lipophilic salt that can leak to the outside layer of the device in order to reach the device-tissue interface and prevent or reduce inflammation, irritability and subsequent excess fibrosis of tissue adjacent to the device/electrode itself (see Stokes column 3, lines 8-43).

12. As to Claim 17, Stokes discloses distal tip electrodes 22-22'''' coupled to the one or more conductors 28 and adapted to stimulate the implant site. Stokes further discloses that it is well known in the art to utilize a polymeric plug held within the polymeric layer 12 of a device 10 which contains a lipophilic salt that can leak to the outside layer of the device in order to

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reach the device-tissue interface and prevent or reduce inflammation, irritability and subsequent excess fibrosis of tissue adjacent to the device/electrode itself (see Stokes column 3, lines 8-43).

13. As to Claim 18, Stokes discloses that the polymeric plug may be formed of a material selected from the group consisting of silicone and polyurethane (see Stokes column 3, lines 8-43).

14. As to Claims 22 and 25-26, Stokes discloses an implantable medical electrical lead (see Stokes Fig. 1) comprising tines, read as distal fixation elements 26 adapted to secure the medical electrical lead to an implant site (see Stokes Figs. 2-3 and column 7, lines 4-8), one or more elongate conductors 28 (see Stokes Figs. 2 and 6 and column 8, lines 48-56), an electrode [22 (unipolar embodiment) or 22' (bipolar embodiment) or 22'' – 22''' depicted in Stokes Figs. 8-11] coupled to a one of the one or more conductors 28, adapted to stimulate in proximity to the implant site and including an outer surface (see Stokes Figs. 2, 6 and 8-11 and column 7, lines 9-11, 26-30 and 41-49). Stokes discloses the claimed invention as discussed above except that the outer surfaces of the electrodes 22-22''' are not disclosed to comprise a layer of a catalytic agent, having a nitrite reductase and/or nitrate reductase or nitrosothiol reductase activity where the catalytic layer converts nitrite/nitrate or nitrosothiols to nitric oxide when in contact with blood.

Michal, however, discloses a method of providing a therapeutic, diagnostic or lubricious hydrophilic coating on a variety of intracorporeal medical devices such as stents, catheters, guidewires, leads, vascular grafts or any intracorporeal device coated with a polymeric primer or without a primer (see Michal Abstract and column 2, lines 5-12). Specifically, Michal discloses one embodiment of the invention 10 comprising a catheter, read a device 11 having a

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therapeutic, diagnostic, or hydrophilic coating 18, the coating 18 comprising a polymerized base coat 19 on the device (formed from a solution of a binding component and a grafting component) and a top coat 20 on the base coat 19, comprising a therapeutic, diagnostic or hydrophilic agent, or a complex of a therapeutic, diagnostic or hydrophilic agent and a linking agent, the therapeutic, diagnostic or hydrophilic agent or the linking agent having a functional group which bonds with a binding component of the polymeric base coat 19, the functional group selected from the group consisting of carboxyl, hydroxy, amine, and thiol, covalently bonded to the binding component (see Michal Figs. 1-2, column 2, lines 13-39, column 6, lines 35-50 and column 18, lines 30-67 – column 19, lines 1-3).

Michal further discloses that the therapeutic or diagnostic agent of the top coat 19 may comprise a nitric oxide donating compound, read as a catalytic agent (see Michal column 4, lines 1-9 and column 19, lines 66-67 – column 20, lines 1-4) and that the nitric oxide donor compounds/catalytic agents may be used to improve biocompatibility of a medical device, to prevent or inhibit platelet aggregation, to inhibit restenosis, to promote wound healing or they may be used as a vasodilator relaxing smooth muscles of a vessel prior to, during and/or after angioplasty or device placement (see Michal column 4, lines 10-13 and lines 52-57). Michal discloses a variety of suitable nitric oxide donor drugs including nitric oxide-polyamine complexes, 2-methyl-2-nitrosopropane, S-Nitroso-N-acetyl-D,L-penicillamine, 3-morpholinoxydoimine, sodium nitrate, s-nitrosoglutathione, sodium nitroprusside, and nitroglycerine (see Michal column 4, lines 57-65) and it is inherent that any of these catalytic agents have nitrite reductase and/or nitrate reductase or nitrosothiol reductase activity and that they convert nitrite/nitrate to nitric oxide when in contact with blood since they all are capable of

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inhibiting platelet aggregation and/or restenosis. Michal further specifies that the invention (the nitric oxide donating coating) may be applied to a medical device with a polymeric surface such as a polymeric catheter (described above) or a metal device coated with a polymeric primer or without a primer. An electrode is synonymous with such a metal device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the electrode of Stokes in view of Michal to include a layer of a catalytic agent, having a nitrite reductase and/or nitrate reductase or nitrosothiol reductase activity where the catalytic layer converts nitrite/nitrate or nitrosothiols to nitric oxide when in contact with blood in order to provide the electrode with improved biocompatibility, capabilities to prevent or inhibit platelet aggregation and/or to inhibit restenosis, capabilities to promote wound healing and/or to be able to be used as a vasodilator relaxing smooth muscles of a vessel prior to, during and/or after angioplasty or lead placement.

15. As to Claim 23, Stokes discloses that the electrode 22 is a porous platinum ball electrode, inherently including a porous side wall and that it is well known in the art to utilize a polymeric plug held within the polymeric layer 12 of a device 10 which contains a lipophilic salt that can leak to the outside layer of the device in order to reach the device-tissue interface and prevent or reduce inflammation, irritability and subsequent excess fibrosis of tissue adjacent to the device/electrode itself (see Stokes column 3, lines 8-43).

16. As to Claim 24, Stokes discloses that the polymeric plug may be formed of a material selected from the group consisting of silicone and polyurethane (see Stokes column 3, lines 8-43).

17. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes in view of Michal as applied to claim 1 above, and further in view of Halperin et al. (U.S. 5,564,434) (herein Halperin). The previously modified Stokes reference discloses the claimed invention as discussed above except that the device does not further comprise a physiological sensor capsule coupled to the one or more conductors where the outer surface of the polymeric layer overlays a portion of the sensor capsule.

Halperin, however, teaches that it is well known in the art to employ a metal housed physiological sensor module, read as a capsule 20 coupled to one or more extending conductors 14 and 16 in a pacemaker lead in order to enable rate responsive pacing functions employing temperature or pressure sensing (see Halperin Abstract, Figs. 2 and 3 and column 7, lines 19-67). Michal further specifies that the invention (the nitric oxide donating coating) may be applied to a medical device with a polymeric surface such as a polymeric catheter (described above) or a metal device coated with a polymeric primer or without a primer. The sensor capsule 20 of Halperin is synonymous with such a metal device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Stokes in view of Michal and Halperin to include a physiological sensor capsule coupled to the one or more conductors where the outer surface of the polymeric layer overlays a portion of the sensor capsule in order to allow rate responsive pacing/defibrillation utilizing parameters such as temperature and pressure and to provide the sensor capsule with improved biocompatibility, capabilities to prevent or inhibit platelet aggregation and/or to inhibit restenosis, capabilities to promote wound healing and/or to be able to be used as a vasodilator relaxing smooth muscles of a vessel prior to, during and/or after angioplasty or lead placement.

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18. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes in view of Michal as applied to claims 1, 4 and 8 above, and further in view of Borgersen et al. (U.S. 2001/0018607) (herein Borgersen). The previously modified Stokes reference discloses the claimed invention as discussed above except the device is not specified to comprise a coil electrode coupled to the one or more conductors and overlaying the outer surface of the polymeric layer.

Borgersen, however, discloses an implantable therapy delivery and/or diagnostic device 20 comprising an elongated insulated body 40 fabricated of a plurality of co-extruded biocompatible elastomers (see Borgersen page 4, paragraph 35) such as polyurethane (see Borgersen page 6, paragraph 47) to form a multi-luminal device containing a plurality of conductors (see Borgersen page 4 paragraph 35) allowing for selective control of body stiffness for bending, torsion, axial tension or compression over the full length of the device and increased conductivity (see Borgersen page 4, paragraph 27). Borgersen teaches that it is well known in the art for the body of such a device to comprise one or more insulated, conductive wires surrounded by an outer sheath (see Borgersen page 1, paragraph 3). Borgersen also teaches that electrode 42 may correspond to any conventionally available pace/sense and cardioversion/defibrillation electrodes (see Borgersen page 4, paragraph 36) and further discloses electrode 42 as a coil overlaying outer elastomer body 40 (see Borgersen Fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Stokes in view of Michal and Borgersen to comprise a coil electrode coupled to one of the one or more wire conductors and overlaying the outer surface of the polymeric layer

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forming the device body to improve the inventions conductive objectives (i.e. possible defibrillation capabilities).

19. Claims 7, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stokes in view of Michal and Borgersen as applied to claims 1, 4 and 8 above, and further in view of Vachon (U.S. 5,861,023). The previously modified Stokes reference discloses the claimed invention as discussed above except the coil electrode is not partially embedded in the outer surface of the polymeric layer.

Vachon, however, teaches that it is known to coat or cover a helically wound electrode with an electrically conductive polymeric material for inhibiting tissue ingrowth and for further reducing risk to the patient in the event removal of the device becomes necessary (see Vachon column 1, lines 54-61). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Stokes in view of Michal, Borgersen, and Vachon to comprise a coil electrode coupled to one of the one or more wire conductors and partially embedded in the outer surface of the polymeric layer forming the device body to improve the inventions conductive objectives, to inhibit tissue ingrowth, and to further reduce risk to the patient in the even removal of the device becomes necessary.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Davidson (U.S. 5,496,359) discloses implants, as well as catheters and other surgical instruments, fabricated from a core or substrate of a low modulus metal coated with blue to black

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zirconium oxide or zirconium nitride that provides enhanced thrombogenicity, biocompatibility, blood compatibility, corrosion-resistance, durability, and electrical insulation.

Igo et al. (U.S. 5,681,278) teaches coronary vasculature treatment methods employing nitric oxide donor agents.

Keefer et al. (U.S. 5,650,447) teaches methods of using nitric-oxide-releasing agents and polymers to treat, ameliorate or prevent the onset of restenosis and related disorders.

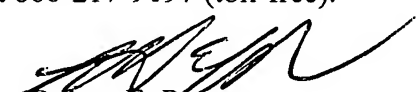
Yafuso et al. (U.S. 4,919,891) teaches the use of sensor with an anti-thrombogenic overcoating.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Reidel whose telephone number is (571) 272-2129. The examiner can normally be reached on Mon-Thurs 8:00-5:30, every other Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jessica L. Reidel 04/24/06
Examiner
Art Unit 3766


Robert E. Pezzuto
Supervisory Patent Examiner
Art Unit 3766